

Patent claims

1. Paper comprising:
 - a) a paper substrate and
 - b) a preparation applied to at least one side of the paper substrate over the entire surface and containing at least one surfactant and at least one pigment having a particle diameter of from 1 to 500 nm, but no binder, the preparation containing a binder in a ratio to the pigment of not more than 5 parts by weight of binder : 100 parts by weight of pigment (based in each case on the solids content).
2. Paper according to Claim 1, characterized in that the preparation has a coat weight of from 0.5 to 20 g/m² (absolutely dry) per side.
3. Paper according to Claim 1 or 2, characterized in that from 0.05 to 2.5 g/m² (absolutely dry) of surfactant are present per side in the preparation.
4. Paper according to any of the preceding claims, characterized in that the surfactant is an anionic, cationic, nonionic or amphoteric surfactant.
5. Paper according to any of Claims 1 to 4, characterized in that from 0.45 to 17.5 g/m² (absolutely dry) of pigment are present per side in the preparation.
6. Paper according to any of Claims 1 to 5, characterized in that the pigment has an overall cationic and/or anionic and/or nonionic charge.
7. Paper according to any of Claims 1 to 6, characterized in that the pigment is an oxide and/or mixed oxide of a metal and/or an oxide and/or mixed oxide of a semi-metal/semiconductor.
8. Paper according to any of the preceding claims, characterized in that the preparation contains at least one further additive.
9. Paper according to any of Claims 1 to 8, characterized in that the paper substrate contains at least one filler.
10. Paper according to Claim 9, characterized in that the filler has a cavity volume.
11. Paper according to Claim 9 the 10, characterized in that the filler has an oil number, measured according to DIN EN ISO 787-5, of from 10 to 150 g/ 100 g of filler.
12. Paper according to any of Claims 9 to 11, characterized in that the filler is selected from the group consisting of chalk, precipitated chalk, clay, talc, calcined clay, alumina, aluminum hydroxide, gypsum, hydrated alumina, silica, silicic acid, diatomaceous earth, titanium dioxide and mixtures thereof.

13. Paper according to any of Claims 1 to 12, characterized in that the paper substrate contains at least one additive.

14. Paper according to any of the preceding claims, characterized in that at least one further coating is present on the preparation on that side of the paper substrate on which the preparation is applied.

15. Paper according to Claim 14, characterized in that the coating contains at least one pigment and at least one binder.

16. Paper according to Claim 15, characterized in that the pigment has a particle diameter of from 1 to 500 nm and is preferably selected from the group consisting of oxide and/or mixed oxide of a metal, oxide and/or mixed oxide of a semimetal/semiconductor and mixtures thereof.

17. Paper according to any of Claims 14 to 16, characterized in that the coating contains at least one further additive.

18. Process for the production of a paper, comprising the step: application of a preparation containing at least one surfactant and at least one pigment having a particle diameter of from 1 to 500 nm to the entire surface on at least one side of a paper substrate, the preparation containing binder in a ratio to pigment of not more than 5 parts by weight of binder : 100 parts by weight of pigment (based in each case on the solids content).

19. Process for the production of a paper according to Claim 18, characterized in that at least one further coating is applied on the preparation on that side of the paper substrate on which the preparation was applied.

20. Use of the paper according to any of Claims 1 to 17 as a print medium in a printing process.

21. Use of the paper according to Claim 20, characterized in that the printing process is selected from the printing processes consisting of offset printing, digital printing, inkjet printing, gravure printing, flexographic printing, newspaper printing, relief printing, letterpress printing, sublimation printing, laser printing, electrophotographic printing processes and combinations of the printing processes.

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